CLAIMS

1 - Process for the manufacture of isobutyric anhydride by reacting acetic anhydride with isobutyric acid, distilling the acetic acid generated as it is formed, characterized in that the reactor is initially loaded with at least a portion of one of the reagents and a portion of the other such that the reagents are in an excess molar ratio relative to the stoichiometry of one of the reagents, and the reaction is carried out while adding the remainder of the reagents as the reaction progresses and according to the place left free in the reactor by the distillation of the acetic acid produced by the reaction, until the desired overall molar ratio of the reagents is reached.

2 - Process according to Claim 1, characterized in that the totality of one of the reagents and a portion of the second are initially loaded.

3 - Process according to either of Claims 1 and 2, characterized in that the overall isobutyric acid/acetic anhydride molar ratio is between 0.5 and 5.

4 - Process according to Claim 3, characterized in that the overall isobutyric acid/acetic anhydride molar ratio is between 1.5 and 2.2.

5 - Process according to one of Claims 1 to 4, characterized in that the initial isobutyric acid/acetic anhydride or acetic ahydride/isobutyric acid molar ratio is between 0.2 and 1.

6 - Process according to one of Claims 1 to 5, characterized in that the reaction is performed in a stirred reactor surmounted by a distillation column whose efficiency is at least 8 theoretical plates.

7 - Process according to one of Claims 1 to 6, characterized in that the reaction is performed at a temperature of 70 to 150°C, preferably of 100 to 120°C.

8 - Process according to one of Claims 1 to 7, characterized in that the reaction is performed at a

pressure of between 5.33×10^4 Pa (400 mmHg) and 0.67×10^4 Pa (50 mmHg).

9 - Process according to one of Claims 1 to 8, characterized in that the desired temperature at the top of the column is adjusted according to the pressure so as to correspond to the temperature for distillation of the acetic acid during the whole reaction.

10 - Process according to one of Claims 1 to 9, characterized in that after completion of the reaction, the crude material is purified by distilling the excess acetic anhydride and the residual mixed anhydride.